UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/074,839	10/24/2001	Neil McClure	392902	6338

30955   7590   09/18/2009
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ART UNIT	PAPER NUMBER
3623	

NOTIFICATION DATE	DELIVERY MODE
09/18/2009	ELECTRONIC

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PTOL-90A (Rev. 04/07)

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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Ex parte Neil McClure

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Appeal 2009-004508
Application 10/074,839
Technology Center 3600

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Decided: September 16, 2009

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Before MURRIEL E. CRAWFORD, JOSEPH A. FISCHETTI, and BIBHU
R. MOHANTY, *Administrative Patent Judges.*

MOHANTY, *Administrative Patent Judge.*

DECISION ON APPEAL

STATEMENT OF THE CASE

The Appellant seeks our review under 35 U.S.C. § 134 (2002) of the final rejection of claims 1-46 which are all the claims pending in the application. We have jurisdiction under 35 U.S.C. § 6(b) (2002). Oral arguments were presented by telephone on September 9, 2009.

SUMMARY OF THE DECISION

We AFFIRM.

THE INVENTION

The Appellant's claimed invention is directed to an electronic voting system with a ballot rotation engine (Spec. 7:20-8:1). Claim 1, reproduced below, is representative of the subject matter of appeal.

> 1. An electronic voting system comprising:
> a memory storage device containing
> ballot information including a plurality of ballot options in association with a contest;
> a voting station including
> an electronically configurable ballot information presentation device operable for presenting the ballot options in a selected order during a first voting session, and
> a voter input device operable for permitting voter directed ballot data entry to produce a cast ballot responsively to the ballot information presented by the ballot information presentation device; and
> a ballot rotation engine operable to change the selected order of ballot options according to a predetermined ordering schema for additional voting sessions,
> the ballot rotation engine having means for performing ballot rotation by generating electronically reconfigured ballot images on demand during the course of an election to implement the schema in a controlled manner facilitating

> substantially equal statistical fairness in rotation over at least one level selected from the group consisting of a voting precinct, a group of precincts supported at a polling place, and an entire election jurisdiction.

THE REJECTIONS

The Examiner relies upon the following as evidence in support of the rejections:

Openshaw, II   US 2002/0107724 A1   Aug. 8, 2002

Miller and Krosnick, The Impact of Name Order on Election Outcomes, *Public Opinion Quarterly*, Fall 1998.

The following rejections are before us for review:

1.   Claims 1-46 are rejected under 35 U.S.C. § 103(a) as unpatentable over Openshaw and Miller.

THE ISSUE

At issue is whether the Appellant has shown that the Examiner erred in making the aforementioned rejections of claims 1-46.

This issue turns on whether it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the voting system of Openshaw to include ballot rotation as claimed in light of the disclosure of Morris.

FINDINGS OF FACT

We find the following enumerated findings of fact (FF) are supported at least by a preponderance of the evidence:[1]

FF1. The Specification at page 1 states that ballots may be presented on electronic displays such as CRT's or LCD's or presentation to the voters.

FF2. The Specification at page 6 states that States with election laws requiring ballot rotation in 26.2% of the populace in the 1996 Presidential election required rotation by precinct. Each precinct would appear in the same position on the precinct ballot.

FF3. Openshaw discloses a voting method with touchtone telephones on a private network which use an audio ballot (Title, Abstract).

FF4. Openshaw discloses that an automated system first asks the voter to enter their registration number to be verified [0019].

FF5. Openshaw discloses that after verification the voter is then assigned a pre-approved random electronic ballot in which the voter selections are randomized to obtain privacy from observers when making touchtone selections [0019].

FF6. Miller has disclosed that candidate name order effects appear in 48 percent of 188 races in Ohio in 1992 election returns with candidates listed first receiving an advantage of 2.5%.

FF7. Miller has disclosed a method where name rotation occurred by moving the first-listed candidate to the end of the list until each candidate

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[1] *See Ethicon, Inc. v. Quigg*, 849 F.2d 1422, 1427 (Fed. Cir. 1988) (explaining the general evidentiary standard for proceedings before the Patent Office).

had been listed first in one and only one order (page 298). Appendix B lists
name rotation procedures for ballots and for case of Franklin County, the
name order was the same in each precinct, but rotated among the precincts
(page 324-325).

PRINCIPLES OF LAW

Principles of Law Relating Claim Construction

We determine the scope of the claims in patent applications not solely
on the basis of the claim language, but upon giving claims their broadest
reasonable construction in light of the specification as it would be
interpreted by one of ordinary skill in the art. *In re Am. Acad. of Sci. Tech.
Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004). The properly interpreted claim
must then be compared with the prior art.

Principles of Law Relating to Obviousness

"Section 103 forbids issuance of a patent when 'the differences
between the subject matter sought to be patented and the prior art are such
that the subject matter as a whole would have been obvious at the time the
invention was made to a person having ordinary skill in the art to which said
subject matter pertains.'" *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406
(2007). The question of obviousness is resolved on the basis of underlying
factual determinations including (1) the scope and content of the prior art,
(2) any differences between the claimed subject matter and the prior art, (3)
the level of skill in the art, and (4) where in evidence, so-called secondary
considerations. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966). *See
also KSR*, 550 U.S. at 407 ("While the sequence of these questions might be

reordered in any particular case, the [*Graham*] factors continue to define the inquiry that controls.")

In *KSR*, the Supreme Court emphasized "the need for caution in granting a patent based on the combination of elements found in the prior art," *id.* at 415-16, and discussed circumstances in which a patent might be determined to be obvious. In particular, the Supreme Court emphasized that "the principles laid down in *Graham* reaffirmed the 'functional approach' of *Hotchkiss*, 11 How. 248." *KSR*, 550 U.S. at 415, (citing *Graham*, 383 U.S. at 12), and reaffirmed principles based on its precedent that "[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." *Id.* at 416. The Court also stated "[i]f a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability." *Id.* at 417. The operative question in this "functional approach" is thus "whether the improvement is more than the predictable use of prior art elements according to their established functions." *Id.*

The Court noted that "[t]o facilitate review, this analysis should be made explicit." *Id.* at 418 (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006) ("[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.") However, "the analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ." *Id.*

ANALYSIS

The Appellant argues that the rejection of claim 1 is improper because Openshaw fails to: ensure substantial statistical fairness as claimed (Supp. Br. 8, Reply Br. 5-6), disclose rotation of candidate names on a ballot since a random sequence is used (Supp. Br. 8, Reply Br. 6-7), and disclose "on demand" rotation (Supp. Br.8-9, Reply Br. 7-8). The Appellant also argues that Miller fails to achieve statistical fairness and that Miller merely rotates the ballot between precincts without regard to the number of voters in a precinct (Supp. Br. 9, Reply Br. 9) in a way that is not "on-demand" (Supp. Br. 10). The Appellant also argues that it would not have been obvious to modify Openshaw's system or Miller's ballot rotation technique to arrive at the present invention as claimed in claim 1 (Supp. Br. 10).

In contrast, the Examiner has determined that Openshaw and Miller have been properly combined to meet the claimed limitations (Ans. 15-20). The Examiner has determined that Miller discloses substantial equal statistical fairness (Ans. 15) and ballot rotation as claimed (Ans. 17-18). The Examiner has also determined that Openshaws randomization generates some rotating order (Ans. 16) and discloses "on-demand" ballots (Ans. 17-19).

We agree with the Examiner. Beginning with claim construction we note that Claim 1 requires in part:

> "the *ballot rotation engine* having means for performing ballot rotation by generating electronically reconfigured ballot images on demand during the course of an election to implement the schema in a controlled manner facilitating *substantially equal statistical fairness* in *rotation over at least one level selected from the group consisting of a voting precinct, a group of*

precincts supported at a polling place, and an entire election jurisdiction" (emphasis added).

Giving the claim its broadest reasonable interpretation in light of the Specification we do not find the term "substantial equal fairness" to define with any particular specificity the degree of "fairness" to be achieved beyond the plain meaning of the term "substantially equal fairness" which would require some degree of breadth. Further the claim limitation reciting "rotation over at least one level selected from the group consisting of a voting precinct, a group of precincts supported at a polling place, and an entire election jurisdiction" does not require equal ballot rotation in each precinct, only at *the level of a voting precinct*, which would allow ballot rotation by precinct. The Appellant argues that the claim language requires name rotation *within* each precinct but the claim language does not require this.

Turning next to the issue of obviousness, we note that In *KSR*, the Supreme Court rejected the Federal Circuit's rigid application of its teaching, suggestion, motivation test in favor of an expansive and flexible approach. *Id.*, 550 U.S. at 415. The Supreme Court noted that often, it will be necessary "to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue." *Id.*, 550 U.S. at 418. The Supreme Court noted that the Court of Customs and Patent Appeals "captured a helpful insight" when it first established the teaching, suggestion, motivation test, but made clear that "the analysis need

not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ." *Id.*, 550 U.S. at 418.

We note that the Appellant has acknowledged in the Specification that a ballot may be presented on electronic displays such as CRT's and LCD's and that many States with election laws require ballot rotation by precinct (FF1, FF2). Here, Openshaw has disclosed a voting method with touchtone telephones on a private network which use an audio ballot (FF3). Openshaw has also disclosed that a verified voter is then assigned an electronic ballot in which the voter selections are randomized to obtain privacy from observers when making touchtone selections (FF4, FF5). Miller has disclosed that name order effects appear in 48 percent of 188 races in Ohio in 1992 election returns with candidates listed first receiving an advantage of 2.5% (FF6). Miller has also disclosed a method where name rotation occurred by moving the first-listed candidate to the end of the list until each candidate had been listed first in one and only one order. In Miller's method, the ballot name order was the same in each precinct, but rotated among the precincts (FF7). Thus, Openshaw has disclosed an electronic voting method in which names are varied in a random order and Miller had disclosed rotation of names on a ballot to induce a level of fairness. The modification of the system of Openshaw to have name rotation on a ballot to induce a level of fairness as disclosed by Miller is considered an obvious, predictable combination of known elements for their functions and such a system would have some level of "substantial statistical fairness." Here, electronic voting systems would be well known to one of ordinary skill in the art, and given

the demands in the marketplace requiring ballot rotation the modification of the ballot system of Openshaw to include such ballot rotation in light of Miller would have been obvious and readily inferred. The Appellant has argued that Openshaw fails to disclose an "on-demand" ballot but this is unclear since Openshaw requires the voter to be verified before given a ballot (FF4). Regardless, one of ordinary skill in the art could have readily inferred that the ballots random name order could be generated "on-demand" since in an electronic system it would save disk storage space and prevent the loss of digital ballots before use which could lead to ballot tampering. While the claim does not require ballot rotation of names within in each precinct instead of at the precinct level, we still find such a modification would have been obvious as well. One of ordinary skill in the art could have readily determined that equal ballot name rotation within each precinct, or even for all voters among all the precincts, would give a more statistically fair election and require only a single system to generate the random ballots rather than to have a different system generating ballots at each precinct. For these reasons the rejection of claim 1 is sustained. The Appellant has presented the same arguments for claims 24 and 43 and the rejection of these claims is sustained for the same reasons. The rejection of claims 2-23, 25-43, and 44-46 is also sustained since the Appellant has merely listed what the claims recite in the Brief. Note that a statement which merely points out what a claim recites will not be considered an argument for separate patentability of the claim (see 37 § C.F.R. 41.35 (c)(1)(vii) 2008).

CONCLUSIONS OF LAW

We conclude that Appellant has not shown that the Examiner erred in rejecting claims 1-46 under 35 U.S.C. § 103(a) as unpatentable over Openshaw and Miller.

DECISON

The Examiner's rejection of claims 1-46 is sustained.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv) (2007).

AFFIRMED

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